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IN THE CLAIMS

Claims 1-39 (canceled)

40. (currently amended) An electrosterically stabilized aqueous polyurethane dispersion prepared by the process of:

a) preparing a hydrophilic and solvent-free macromonomer (A)(ii) with monomodal molecular mass distribution, ~~wherein~~ wherein macromonomer A(ii) has two or more hydroxyl groups that are reactive towards isocyanate groups, by

a₁) reacting 50 to 100 parts by weight of at least one of a ~~of a~~ hydrophilic alkyl- or and/or arylpolyalkylene glycol (A)(i) having at least one of a ~~a~~ primary or and/or secondary or and/or tertiary hydroxyl group which is reactive toward isocyanate groups and having a molecular mass of 250 to 5000 daltons with 1 to 100 parts by weight of a polyisocyanate (B)(i), comprising at least one diisocyanate, polyisocyanate, a derivative of a polyisocyanate based on bis(4-isocyanato-cyclohexyl)methane (H₁₂MDI), 1,6-diisocyanatohexane (HDI) or 1-isocyanato-5-isocyanatomethyl-3,3,5-trimethylcyclohexane (IPDI) which contain an allophanate, a biuret, a carbodiimide, an isocyanurate, an uretdione or an urethane group, a polyisocyanate derivative based on 1,6-diisocyanatohexane (HDI) which has been hydrophilically modified or a higher homolog of aromatic polyisocyanate 2,4-diisocyanatoluene, toluene diisocyanate (TDI) or bis(4-isocyanatophenyl)methane (MDI) polyisocyanate derivative or polyisocyanate homolog having two or more (cyclo)aliphatic or aromatic isocyanate groups of identical or different reactivity, optionally in the presence of a catalyst,

a₂) reacting the preadduct from stage a₁) completely with 0.5 to 200 parts by weight of a compound (C) having two or more primary amino groups, ~~and/or~~ secondary amino

groups ~~or and/or~~ hydroxyl groups which are reactive toward isocyanate groups and having a molecular mass of 50 to 500 daltons, and ~~also~~

b) by preparing a polyurethane dispersion by dispersion, wherein

b₁) reacting 2 to 50 parts by weight of the hydrophilic and solvent-free macromonomer (A)(ii) with monomodal molecular mass distribution, having two or more hydroxyl groups which are reactive toward isocyanate groups and having a molecular mass of 500 to 5500 daltons, reacting with 25 to 250 parts by weight of a polyisocyanate component (B)(ii) comprising consisting of at least one diisocyanate, polyisocyanate, a derivative of a polyisocyanate based on bis(4-isocyanato-cyclohexyl)methane (H₁₂MDI), 1,6-diisocyanatohexane (HDI) or 1-isocyanato-5-isocyanatomethyl-3,3,5-trimethylcyclohexane (IPDI) which contain an allophanate, a biuret, a carbodiimide, an isocyanurate, an uretdione or urethane groups, a polyisocyanate derivative based on 1,6-diisocyanatohexane (HDI) which has been hydrophilically modified or a higher homolog of the aromatic polyisocyanates 2,4-diisocyanatotoluene, toluene diisocyanate (TDI) or bis(4-isocyanatophenyl)methane (MDI) polyisocyanate derivative or polyisocyanate homolog having two or more (cyclo)aliphatic or aromatic isocyanate groups, optionally with the addition of 0 to 50 parts by weight of a solvent component (D) and optionally in the presence of a catalyst,

b₂) reacting the polyurethane preadduct from stage b₁) with 50 to 100 parts by weight of a polymeric polyol (A)(iii) having two or more hydroxyl groups which are reactive toward isocyanate groups and having a molecular mass of 500 to 5000 daltons and optionally

with 0.5 to 10 parts by weight of a low molecular mass polyol component (A)(iv) having 2 or more hydroxyl groups and a molecular weight of 50 to 499 daltons, optionally in the presence of a catalyst,

b₃) reacting the polyurethane preadduct from stage b₂) with 2 to 20 parts by weight of a low molecular mass, anionically modifiable polyol component (A)(v) having one, two or more hydroxyl groups which are reactive toward isocyanate groups and having at least one one or more inert carboxylic acid or and/or sulfonic acid group groups, which can be converted with a base fully or partly into into a carboxylate or a and/or sulfonate group groups respectively, or are already in the form of carboxylate or and/or sulfonate groups, and having a molecular mass of 100 to 1000 daltons, optionally in the presence of a catalyst,

b₄) admixing the polyurethane prepolymer from stage b₃), before or during dispersion in water, for the purpose of full or partial neutralization of the acid groups, with 2 to 20 parts by weight of a neutralizing component (E),

b₅) dispersing the optionally neutralized polyurethane prepolymer from stage b₄) in 50 to 1500 parts by weight of water, which optionally further contains 0 to 100 parts by weight of a formulating component (F), and finally

b₆) reacting the partially neutralized polyurethane prepolymer dispersion from stage b₅) ~~is reacted~~ with 3 to 60 parts by weight of a chain extender component (G) and also, subsequently or simultaneously, with 0 to 30 parts by weight of a chain stopper component (H) to yield the electrosterically stabilized aqueous polyurethane dispersion.

41. (currently amended) The polyurethane dispersion of claim 40, wherein component (A)(i) comprises at least one of a copolymer, a random copolymer, or a block copolymer, ~~copolymers and/or random copolymers and/or block copolymers~~, composed of 90% to 10% by weight of ethylene oxide and 10% to 90% by weight of further alkylene oxides having 4 to 30 carbon atoms per alkylene oxide with at least one of a primary, secondary or ~~and/or~~ ~~secondary and/or~~ tertiary hydroxyl group.

42. (currently amended) The polyurethane dispersion of claim 40, wherein component (A)(i) comprises at least one of a monofunctional alkylpoly(ethylene oxide-co/ran- ~~alkylene oxide), an oxide) and/or alkylpoly(ethylene oxide-block-alkylene oxide), a sodium~~ ~~and/or sodium sulfonatopropylpoly(ethylene oxide-co/ran-alkylene oxide), sodium oxide,)~~ ~~and/or sodium sulfonatopropylpoly(ethylene oxide-block-alkylene oxide)~~ having at least one of a primary or secondary or ~~and/or secondary and/or~~ tertiary hydroxyl group, comprising from ~~composed of~~ 90% to 10% by weight of ethylene oxide and 10% to 90% by weight of a further alkylene oxide.

43. (currently amended) The polyurethane dispersion of claim 40, wherein the alkylene oxide comprises propylene oxide, butylene oxide, dodecyl oxide, isoamyl oxide, oxetane, substituted oxetanes, α -pinene oxide, styrene oxide, tetrahydrofuran or a ~~or~~ further aliphatic or aromatic alkylene oxide oxides having 4 to 30 carbon atoms per alkylene oxide.

44. (currently amended) The polyurethane dispersion of claim 40, wherein component (A)(i) ~~comprises a~~ comprises monofunctional polyalkylene glycol glycols and component (B)(i) is an at least functional polyisocyanate.

45. (previously presented) The polyurethane dispersion of claim 40, wherein component (B)(i) comprises toluene 2,4-diisocyanate, isomer mixtures of toluene 2,4-diisocyanate and toluene 2,6-diisocyanate, or isomer mixtures of isophorone diisocyanate.

46. (previously presented) The polyurethane dispersion of claim 40, wherein component (C) comprises diethanolamine.

47. (currently amended) The polyurethane dispersion of claim 40, wherein component (A)(iii) is at least one of a linear or a ~~and/or~~ difunctional polyalkylene glycol glycols having a molecular mass of 500 to 5000 daltons.

48. (currently amended) The polyurethane dispersion of claim 40, wherein component (A)(iii) comprises a polypropylene glycol or a ~~polypropylene glycols and/or~~ hydrophobically modified block copolymer having a ~~copolymers with~~ ABA, BAB or (AB)_n structure, wherein A is polymer segment having hydrophobizing properties and B is a polymer segment based on polypropylene oxide.

49. (currently amended) The polyurethane dispersion of claim 48, wherein the polymer segment A comprises polybutylene oxide, polydodecyl oxide, polyisoamyl oxide,

~~polyoxetane, substituted polyoxetane, poly- α -pinene oxide, polystyrene oxide, polytetramethylene oxide, further aliphatic or aromatic polyoxyalkylenes having 4 to 30 carbon atoms per alkylene oxide, oxide, an α,ω -polymethacrylatediol, polymethacrylatediol, a α,ω -dihydroxyalkylpolydimethyl-siloxane, a macromonomer, a telechele, or a mixture -siloxanes, macromonomers, telecheles or mixtures thereof.~~

50. (previously presented) The polyurethane dispersion of claim 40, wherein component (A)(v) is a bishydroxyalkanecarboxylic acid.

51. (previously presented) The polyurethane dispersion of claim 50, wherein said bishydroxyalkanecarboxylic acid is dimethylolpropionic acid.

52. (previously presented) The polyurethane dispersion of claim 40, wherein the NCO/OH equivalent ratio in stage a₁) is set at 1.9 to 2.1 and the NCO/OH+NH equivalent ratio in stage a₂) is set at 0.95 to 1.05.

53. (currently amended) The polyurethane dispersion of claim 40, wherein the NCO/OH equivalent ratio of components (A)(i), (A)(ii), (A)(iii), (A)(iv), (A)(v) and (B)(ii) in stage b) is set at a value of 1.25 to 2.5 ~~to 2.5, preferably 1.4 to 2.0.~~

54. (currently amended) The polyurethane dispersion of claim 40, wherein the neutralizing component (E) is added in an amount such that the degree of neutralization, based

on the free carboxylic acid ~~and/or or sulfonic sulfonic acid~~ or both carboxylic acid and sulfonic acid groups of the polyurethane prepolymer, is 25 to 100 equivalent%.

55. (previously presented) The polyurethane dispersion of claim 40, wherein the chain extender component (G) is added in an amount such that the degree of chain extension, based on the free isocyanate groups of the polyurethane prepolymer, is 50 to 100 equivalent%.

56. (currently amended) The polyurethane dispersion of claim 40, wherein the chain stopper component (H) is added in an amount such that the degree of chain termination, based on the free isocyanate groups of the polyurethane prepolymer, is 0 to 50 equivalent%, ~~preferably 20 to 30 equivalent%.~~

57. (currently amended) The polyurethane dispersion of claim 40, wherein the amount of ethylene oxide group in the polyurethane polymer formed from components (A), (B), (C), (E), (G) and (H) is 0.5% to 10% ~~by weight, preferably 2% to 5% by weight.~~

58. (currently amended) The polyurethane dispersion of claim 40, wherein the polyurethane polymer formed from components (A), (B), (C), (E), (G) and (H) the amount of carboxylate ~~and/or or sulfonate sulfonate~~ groups is set at 5 to 25 meq $(100\text{ g})^{-1}$; ~~preferably at 10 to 20 meq $(100\text{ g})^{-1}$, and the acid number at 5 to 30 meq $\text{KOH} \cdot \text{g}^{-1}$, preferably at 10 to 25 meq $\text{KOH} \cdot \text{g}^{-1}$.~~

59. (currently amended) The polyurethane dispersion of claim 40, wherein the solids content of polyurethane polymer composed of components (A), (B), (C), (E), (G) and (H) is set at 30% to 70% by weight, ~~preferably 50% to 55% by weight~~, based on the total amount of the polyurethane dispersion.

60. (currently amended) The polyurethane dispersion of claim 40, wherein the average particle size of the micelles is 50 to 500 nm, ~~preferably 100 to 400 nm~~.

61. (previously presented) The polyurethane dispersion of claim 40, wherein the average molar mass (number average) is 25,000 to 500,000 daltons.

62. (currently amended) A process for preparing an electrosterically stabilized polyurethane dispersion comprising

a) preparing a hydrophilic and solvent-free macromonomer (A)(ii) with monomodal molecular mass distribution by

a₁) reacting 50 to 100 parts by weight of a hydrophilic alkyl- or arylpolyalkylene glycol (A)(i) with 1 to 100 parts by weight of a polyisocyanate component (B)(i), optionally in the presence of a catalyst, in the absence of solvents, the reaction conditions and the selectivities of components (A)(i) and (B)(i) being chosen such that only one isocyanate group of component (B)(i) reacts with component (A)(i), and subsequently

a₂) reacting the uniform preadduct from stage a₁) completely with 0.5 to 200 parts by weight of a compound (C) in the absence of solvents, the reaction conditions and the

selectivity of component (C) being chosen such that only one reactive group of component (C) reacts with the free isocyanate group(s) of the preadduct, and

b) preparing the polyurethane dispersion is prepared by

b₁) reacting 2 to 50 parts by weight of the hydrophilic and solvent-free macromonomer (A)(ii) with 25 to 250 parts by weight of the polyisocyanate component (B)(i), optionally in the presence of 0 to 50 parts by weight of a solvent component (D) and also of a catalyst,

b₂) reacting the polyurethane preadduct from stage b₁) with 50 to 100 parts by weight of a polymeric polyol (A)(iii) and optionally with 0.5 to 10 parts by weight of a low molecular mass polyol component (A)(iv), optionally in the presence of a catalyst,

b₃) reacting the homogeneous polyurethane preadduct from stage b₂) with 2 to 20 parts by weight of a polyol component (A)(v), optionally in the presence of a catalyst,

b₄) admixing the homogeneous polyurethane prepolymer from stage b₃), before or during dispersion in 50 to 1500 parts by weight of water, with 2 to 20 parts by weight of a neutralizing component (E),

b₅) dispersing the optionally (partially) neutralized polyurethane prepolymer from stage b₄) in 50 to 1500 parts by weight of water, which optionally further contains 0 to 100 parts by weight of a formulating component (F), and finally

b₆) reacting the (partially) neutralized polyurethane prepolymer dispersion from stage b₅) with 3 to 60 parts by weight of a chain extender component (G) and also, subsequently or simultaneously, with 0 to 30 parts by weight of a chain stopper component (H).

63. (previously presented) The process of claim 62, wherein in reaction stage a₁) component (B)(i) is metered into component (A)(i), or component (A)(i) is metered into component (B)(i).

64. (previously presented) The process of claim 62, wherein reaction stages a₁) and a₂) are carried out at a temperature of 10 to 30°C.

65. (previously presented) The process of claim 62, wherein reaction stages b₁), b₂) and b₃) are carried out at a temperature of 60 to 120°C.

66. (previously presented) The process of claim 62, wherein reaction stages b₄) and b₅) are carried out at a temperature of 40 to 60°C.

67. (previously presented) The process of claim 62, wherein reaction stage b₆) is carried out at 30 to 50°C.

68. (previously presented) The process of claim 62, wherein following reaction stage b₆) any free NCO groups still present are completely chain-extended with water.

69. (currently amended) A liquid or pasty construction product comprising the polyurethane dispersion of claim 40, wherein the product is a ~~is in the form of~~

(a) synthetic resin plaster ~~plasters~~,

(b) a bitumen compound ~~bitumen compounds and asphalt, or asphalt~~ and

(c) an individual component of an components of external insulation and finishing system systems, optionally with the addition of a of mineral binder binders.

70. (currently amended) A mineral construction product, wherein the product is products, in the form of

(a) a mortar mortar additive dispersion dispersions for a screed, a screeds, trowel-applied flooring compound compounds, and a leveling component leveling components,

(b) a mortar mortar additive dispersion dispersions for for a construction adhesive adhesives, a tile adhesive tile adhesives and or an EIFS adhesive adhesives,

(c) a dispersion as a mortar adhesive for a dispersions as mortar additives for 2-component grout grouts,

(d) a mortar mortar additive dispersion for a dispersions for concrete repair system systems, and

(e) a polymer dispersion as additive polymer dispersions as additives in concrete construction work.

71. (currently amended) A formulation comprising the polymer dispersion of claim 40, for sport floor covering or tennis court surfacing, wherein the formulation is in the form of

(a) a binder for an elastic layer binders for elastic layers, composed of rubber granules or of fibers with or without an adjuvant adjuvants,

(b) an adhesion promoter or primer for a base surface of a promoters or primers for the base surfaces of sport floor covering coverings,

- (c) a spray coating ~~spray coatings~~, with or ~~without a~~ ~~without~~ texturing filler ~~fillers~~,
for application ~~to a~~ ~~to~~ rigid or elastic base surface ~~surfaces~~,
- (d) a leveling coating ~~leveling coatings~~ for application ~~to a~~ ~~to~~ rigid or an elastic base
surface ~~surfaces~~,
- (e) a troweling compound ~~troweling compounds~~ for sealing a pore of a rigid or an ~~the~~
~~pores of rigid or~~ elastic base surface ~~surfaces~~,
- (f) an adhesive ~~adhesives~~ for bonding prefabricated elastic layers,
- (g) a sealer coating ~~sealer coatings~~, with or without a pigment or pigments, and
- (h) a line paint ~~line paints~~.

72. (currently amended) A formulation comprising the polyurethane dispersion of claim 40, optionally comprising a mineral binder, ~~for a mineral binders~~, ~~for~~ crack-bridging coating system wherein the formulation is ~~systems, in the form of~~

- a) a prime ~~prime~~, float or top layer, and a layers, ~~and also spray coatings on a~~
~~coatings or sealer coatings on~~ preferably primed surface of a built structure ~~surfaces of built~~
~~structures~~,
- b) an optionally ~~(optionally flame-retarded~~ ~~retarded)~~ roof coating ~~coatings~~ or roof-
painting material or, materials, and
- c) an optionally ~~(optionally flame-retarded seal for a built structure~~ ~~retarded)~~ seals
~~for built structures~~ in opencast or underground mining.

73. (previously presented) A cement-based, aqueous high-build coating comprising the polyurethane dispersion of claim 40 as a binder.

74. (currently amended) A coating, sealant, printing ink, paint, varnish, primer, adhesive, membrane for a surface of mineral building materials, a surface of material, ~~such as concrete, gypsum, ceramic, clay, and cement, and also for the surfaces of glass, rubber, wood, a wood and woodbase material materials~~, plastic, metal, paper, and a composite composites, comprising the polyurethane dispersion of claim 40.

75. (previously presented) A composition for coating of a real leather, a synthetic leather, a paper article or a cardboard article, said composition containing the polymer dispersion of claim 40.

76. (previously presented) A composition comprising the polyurethane dispersion of claim 40 in one-, two- or multi-component form, and further components comprising formulating ingredients or hardeners.

77. (previously presented) A composition comprising the polyurethane dispersion of claim 40 and a formulating ingredient and, optionally, further polymers in the form of redispersible powders.

78. (previously presented) The composition of claim 76, wherein the polyurethane dispersion is present in an amount of 0.5% to 75% by weight, based on the composition.

79. (new) The polyurethane dispersion of claim 40, wherein the NCO/OH equivalent ratio of components (A)(i), (A)(ii), (A)(iii), (A)(iv), (A)(v) and (B)(ii) in stage b) is set at a value of 1.4 to 2.0.

80. (new) The polyurethane dispersion of claim 40, wherein the chain stopper component (H) is added in an amount such that the degree of chain termination, based on the free isocyanate groups of the polyurethane prepolymer, is 20 to 30 equivalent%.

81. (new) The polyurethane dispersion of claim 40, wherein the amount of ethylene oxide group in the polyurethane polymer formed from components (A), (B), (C), (E), (G) and (H) is 2% to 5% by weight.

82. (new) The polyurethane dispersion of claim 40, wherein the polyurethane polymer formed from components (A), (B), (C), (E), (G) and (H) the amount of carboxylate or sulfonate groups is set at 10 to 20, meq·(100 g)⁻¹, and the acid number at 10 to 25 meq KOH·g⁻¹.

83. (new) The polyurethane dispersion of claim 40, wherein the solids content of polyurethane polymer composed of components (A), (B), (C), (E), (G) and (H) is set at 50% to 55% by weight, based on the total amount of the polyurethane dispersion.

84. (new) The polyurethane dispersion of claim 40, wherein the average particle size of the micelles is 100 to 400 nm.

85. (new) A membrane for a surface of concrete, gypsum, ceramic, clay or cement comprising the polyurethane dispersion of claim 40.